ρ - density; μ - viscosity. A relationship between Re and π_1 is inconvenient to use and so Re is replaced by its analogue which is obtained by multiplying Re by π_1

$$\pi_2 = \frac{\rho\, nd^2}{\mu} = \frac{nd^2}{\nu} \qquad (2)$$

The calibration curve is then obtained in the form of π_1 as function of π_2. For high flow-rates in particular, the boundary conditions must be extended because, for example, eddy-current losses in leads are proportional to the square of rotor speed. Accordingly, the following criterion is introduced

$$\pi_3' = \frac{k}{\rho Q d^2} \qquad (4)$$

In this equation k is a coefficient of proportionality, constant for a given design of tachometer, which depends on the magnetic field intensity, the dimensions of the current-carrying parts and the properties of their materials. It can be determined experimentally and then when working on liquids of

relatively low viscosity the following expression can be used

$$\pi_3 = \frac{\gamma_o Q_o}{\gamma Q} \qquad (6)$$

where γ_o is the specific gravity of the calibrating liquid used to determine the flow rate Q_o.
If the rotor is heavy, a further criterion π_4 must be introduced to allow for bearing friction. Tests were made with three different designs of flow meter, which are described. The tests were made at room temperature (18 to 20°C) using water, water-glycerine solutions and mixtures of benzene and of kerosene with oil grade CV (SU). The physical properties of the fluids varied within the following ranges: kinematic viscosity from 7 to 150 cm^2/sec, density from 0.7 to 1.2 g/cm^2. The tests were made with a special hydraulic rig in which measurements could be made under steady-state flow conditions measured to within $\pm$ 0.015 cm^3/sec whilst the frequency of the signal to the receiving instrument could be measured to an accuracy of $\pm$ 0.35 c/s.
Card 3/4

L 51509-65 EWT(d)/EWT(l)/EEC(m)/EWT(m)/EWP(w)/EWP(f)/EWP(v)/EPR/T-2/EWP(k)/EWA(h)/EWA(c) Po-4/Pq-4/Pf-4/Ps-4/Peb/Pl-4 WW/RM

ACCESSION NR: AP5015320 UR/0285/65/000/009/0076/0076
681.121.46

AUTHOR: Bel'kovskaya, T. N.; Bykov, L. N.; Kopytov, V. Ye.

TITLE: A turbine flowmeter. Class 42, No. 170702

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 76

TOPIC TAGS: flowmeter, flow measurement, turbine rotor

ABSTRACT: This Author's Certificate introduces: 1. A turbine flowmeter which consists of a pipe containing the fluid whose flow is to be measured, a rotor which turns at a rate proportional to the volumetric flow, and a trachometer. In order to eliminate bearings in the flow meter, the rotor is located between a swirler and a jet straightener. These devices create the pressure difference which is necessary for balancing the drag of the rotor. 2. A modification of this flow meter in which a jet tube is mounted in the center of the swirler. The rotor acts as a valve with negative feedback with respect to the auxiliary stream created by the jet tube. Thus the forces applied to the rotor are balanced and equilibrium is achieved within a wide range of variations in the flow and physical properties of the

Card 1/3

L 51509-65
ACCESSION NR: AP5015320

Fluid which is being inspected.

ASSOCIATION: Leningradskiy ordena krasnogo znameni mekhanicheskiy institut (Leningrad "Order of the Red Banner" Institute of Mechanical Engineering)

SUBMITTED: 09Jan64 ENCL: 01 SUB CODE: IE

NO REF SOV: 000 OTHER: 000

Card 2/3

L 51509-65

ACCESSION NR: AP5015320 ENCLOSURE: 01 0

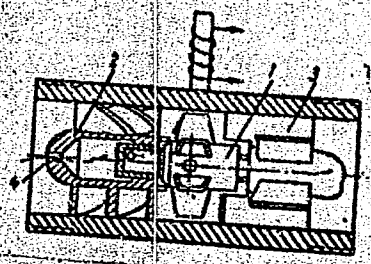


Fig. 1. 1--rotor; 2--swirler; 3--jet straightener; 4--jet tube

Cord 3/3

PHASE I TREASURE ISLAND BIBLIOGRAPHICAL REPORT AID 442 - I

BOOK

Call No.: QC940.R9B9

Author: BYZOV, N. P.

Full Title: SOME PARTICULARITIES OF WIND DISTRIBUTION OVER ASHKHABAD ACCORDING TO DATA FROM PILOT-BALLOON OBSERVATIONS IN 1928

Transliterated Title: Nekotoryye osobennosti v raspredelenii vetrov nad Ashkhabadom po dannym sharo-pilotnykh nablyudeniy za 1928 g

Publishing Data

Originating Agency: Turkmen Meteorological Bureau of the People's Commissariat of Agriculture

Publishing House: Turkmen State Publishing House

Date: 1929 No. pp.: 20 No. of copies: 300

Editorial Staff: None

Text Data

Coverage: The booklet contains an account of 173 diurnal observations of air currents at standard levels up to 10 km. made at the Ashkhabad Regional Meteorological Station (37° 57' N - 58° 23' E) and 8 tables showing average values of wind velocity, increase of velocity with altitude, and wind velocity presented according to compass bearings and altitudes, and also wind direction, frequency of occurence, wind roses, average interlayer wind rotation, and absolute wind rotation at a level from 0.5 to 10 km.

Nekotoryye osobennosti v raspredelenii vetrov nad Ashkhabadom po dannym sharo-pilotnykh nablyudeniy za 1928 g. AID 442 - I

Table of Contents: None
Purpose: Not given
Facilities: None
No. of Russian and Slavic References: None
Available: Library of Congress

2/2

BYZOV-N.P.

551.509.21

5.3-87

Byzov, N. P., A nyomástopográfiai térképek prognosztikai felhasználásal. [Use of topographic pressure charts in forecasting.] *Időjárás*, 56(7/8):201-211, July/Aug. 1952. 8 figs. Trans. from Russian (*Meteorologiia i Gidrologiia*, no. 6, 1946) by Mrs. József Békeffy, revised and annotated by István Bodolai. DLC—The use of topographic pressure charts is explained by three examples on: 1) wave formation at a front situated in a well-developed convergence zone, 2) temperature convergence indicating instability of a frontal wave and 3) significance of temperature convergence and divergence in frontal analysis. *Subject Headings*: 1. Synoptic forecasting. 2. Translations. I. Békeffy, Józsefné (trans.) II. Bodolai, István.—*G.T.*

YUROVITSKAYA, Nina Ivanovna; BYZOV, Timofey Alekseyevich; ZYUZENKOV, I.P., red.; SAVCHENKO, Ye.V., tekhn. red.

[Development of computer engineering] Razvitie vychislitel'noi tekhniki. Moskva, Izd-vo "Znanie," 1960. 27 p. (MIRA 14:12)
(Electronic calculating machines)

BYZOV, V.I., inzh.

Reconditioning the cutting edge of the scrapers of barking machines. Der. prom. 13 no.4:7-8 Ap '64. (MIRA 17:4)

1. TSentral'nyy nauchno-issledovatel'skiy institut mekhanicheskoy obrabotki drevesiny.

DEM'YANOVSKIY, Konstantin Il'ich, kand. tekhn. nauk;
BYZOV, Vasiliy Ivanovich, inzh.; KRYUCHKOV, A.M., red.

[Ways for increasing the wear resistance of saws] Puti povysheniia iznosostoikosti pil. Leningrad, 1963. 20 p. (Leningradskii Dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Derevoobrabatyvaiushchaia promyshlennost', no.6) (MIRA 17:4)

DEM'YANOVSKIY, K.I., kand. tekhn. nauk; BYZOV, V.I., inzh.

More on the hardening of saw teeth. Der. prom. 13 no.6:15-16 Je '64. (MIRA 17:6)

1. TSentral'nyy nauchno-issledovatel'skiy institut mekhanicheskoy obrabotki drevesiny.

Byzova, I.T.

SUBMITTED: December 7, 1957 SOV/109-3-3-22/23

AUTHORS: Golubkov, P.V. and Tsimring, Sh. Ye.

TITLE: The Second All-Union Conference on Radioelectronics of the Ministry of Higher Education of the USSR (Vtoraya vsesoyuznaya konferentsiya MVO SSSR po radioelektronike) - News Item

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol 3, Nr 3, pp 440 - 444 (USSR)

ABSTRACT: The conference took place during September 23 - 29, 1957, at Saratovskiy gosudarstvennyy universitet imeni N.G. Chernyshevskogo (Saratov State University imeni N.G. Chernyshevskiy). Apart from the universities, the conference was attended by the representatives of some scientific research institutes of the Soviet and Ukrainian Academies of Science, various industrial establishments and the interested ministries. This arrangement stimulated the discussion and evaluation of the papers presented and permitted the determination of plans for the future research to be carried out by the universities in the field of radioelectronics.

Card1/16

The problems dealing with various fluctuation phenomena in electron and gas-discharge devices and with the physics and applications of gas discharges at

Card4/16

U.H.F. were discussed in the papers by S.A.Akhmanov, I.T. Trofimenko, G.F. Antonov and N.G. Tikhomirova, who investigated the phenomena in certain oscillatory U.H.F. systems; the problem was also discussed in the papers: "The Electron Velocity Distribution in a Disintegrating Plasma" by A.M. Aleskovskiy; "Frequency and Amplitude Fluctuations of the Oscillations of a 3-cm Klystron Oscillator" by V.N. Nikonov; "De-electronisation of Gas in a 10-cm Antenna Switch" by U.V. Gorokhov and "Detuning of Cavity Resonators by Means of Gas Discharges" by U.V. Gorokhov and I.T. Byzova. The lecture of S.A. Kornilov entitled "Reflex Klystron as a Regenerative U.H.F. Amplifier" was of great practical interest. The simplicity of the amplifier permits the application of this device in the whole range of equipment where the comparatively high level of noise is not important. The Section of Electrodynamics had six sessions, during which over 30 papers and communications were read. A considerable part of these was devoted to the theoretical and experimental investigations of the propagation of electromagnetic waves in various delay systems. The

Card5/16

paper by V.M. Dashenkov entitled "Scattering Properties of Certain Rod-type Delay Systems" gave the scattering equation for a structure consisting of a number of arbitrarily-loaded rods (stubs). The equation was employed to analyse single-stage stub systems and the author found that the theory was in agreement with the experimental results. The communication by V.I. Bespalov and E.Ya. Daune entitled "Propagation of Electromagnetic Waves in a Non-uniform Helix" gave the results of a perturbation-method investigation of the effect of random longitudinal and radial displacements of the helix conductor on the characteristic of the delay system. The results obtained by the authors permit the evaluation of the tolerances in the helices employed in backward-wave tubes. The paper "Generalisation of the Circuit Theory Including the Helical Delay Systems" was concerned with the possibility of the application of small perturbing objects to the measurement of the coupling impedance in a wide range of delay systems. Apart from the theoretical justification of the above method of measuring the coupling impedance, the paper gave some experimental results.

Card6/16

9.1300

AUTHOR: Byzova, I.T.

SOV/141-2-3-14/26

TITLE: Detuning of Cavity Resonators by Means of a Gas Discharge

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika, 1959, Vol 2, Nr 3, pp 431 - 437 (USSR)

ABSTRACT: The phenomenon of cyclotron resonance of the electrons in a plasma can be used to detune the cavity resonators (Ref 1). If a constant magnetic field H , perpendicular to the electrical high-frequency field, is applied to the plasma, the admittance of the plasma in the direction of the high-frequency field E is given by:

$$\sigma_E = \sigma_r \mp i\sigma_i = N\frac{e^2}{m}\left[\frac{\nu(\nu^2 + \omega^2 + \omega_H^2) + i\omega(\nu^2 + \omega^2 - \omega_H^2)}{(\nu^2 - \omega^2 + \omega_H^2)^2 + 4\omega^2\nu^2}\right] \quad (1)$$

where N is the electron concentration,
e and m are the charge and the mass of an electron,
ν is the collision frequency of the electrons,
ω is the angular frequency of the external high-frequency field,

Card 1/4

Detuning of Cavity Resonators by Means of a Gas Discharge

ω_H is the cyclotron frequency and

c is the velocity of light.

The detuning of the resonator by a plasma is due to the reactive component σ_i of the admittance. The real component of the admittance determines the losses in the plasma and the results of the reduction of the Q factor of the resonator. The admittance σ_E can be varied by changing the magnetic field H or the electron concentration N . The latter case corresponds to varying the discharge current passed through the resonator. By comparing the two methods of detuning, it is found that the losses and the rate of their increase are greater when the detuning is effected by the magnetic field than in the case of current-type detuning. The detuning effect of the plasma was investigated experimentally. The system employed is illustrated in the block diagram of Figure 1. A discharge tube, having a diameter of 27.2 mm,

 was situated in the centre of a resonator having

Detuning of Cavity Resonators by Means of a Gas Discharge

dimensions 34 x 72 x 436 mm; the tube was perpendicular to the narrow walls of the resonator and the wave H_{105} was excited in the cavity. The quality factor of the resonator with a "cold" tube was $Q = 3\,500 - 4\,000$. The external magnetic field coincided with the axis of the discharge tube and was perpendicular to the high-frequency electric field. The resonance frequency and Q of the resonator were measured by using its resonance curves. For this purpose, a wavemeter having $Q = 10^4$ was employed; this permitted measurements of the frequency with an error of 10^{-2} Mc/s. Typical detuning curves Δf and loss curves $(1/Q - 1/Q_0)$ are shown in Figures 2 and 3; Figure 2 illustrates the dependence of these parameters on H_0, while Figure 3 shows them as a function of the discharge current. The dependence of the high-frequency losses on the detuning is illustrated in Figure 4. These results are in good agreement with the theory. From the above experimental data, it was concluded that the most satisfactory method of detuning the resonator should be

SOV/141-2-3-14/26

Detuning of Cavity Resonators by Means of a Gas Discharge

based on a tube fitted with two electrodes which are in the form of fine parallel metal wires. Such a tube was constructed and the distance between the electrode wires was 5 - 7 mm. The resonator was then detuned by changing the current passing through the discharge between the wires. The results obtained with this type of tube are illustrated in Figures 5, 6 and 7. Figure 5 shows the dependence of Δf and Q on the discharge current; the tube was filled with neon at a pressure of 5.4 mm Hg; Figures 6 and 5 show Δf as a function of the discharge current for various pressures; Figure 6 refers to a tube filled with neon, while Figure 7 refers to a tube filled with helium.

There are 7 figures and 4 references, 1 of which is English and 3 Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: January 8, 1958

Card 4/4

BYZOVA N. L.

USSR/Meteorology Oct 1947

"Effect of Seasonal Transfer of Air Masses on the Movement of the Earth's Axis," N. L. Byzova, Black Sea Hydrophys Sta, Acad Sci USSR, 4 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 3

The process of nutation of the earth's axis has long been recognized. Author reports results of experiments conducted to establish more accurate analysis of the forced nutation of the earth, and how the movement of air masses over the surface of the earth has compelling effect on the earth's nutation process. Submitted by Academician V. V. Shuleykin, 8 May 1947.

49T68

BYZOVA, N. L.

PA 165T27

USSR/Geophysics - Heat Exchange 1 Jun 50

"Self-Excited Oscillations of a Thermal Convection Current," N. L. Byzova, Marine Hydrophys Inst, Acad Sci USSR

"Dok Ak Nauk SSR" Vol LXXII, No 4, pp 675-678

Describes experiments with water in partitioned rectangular vessel having heat source (heater) and sink (ice). Recordings show water temperature at any point undergoes regular oscillations with period of the order of 4-10 min and constant amplitude in addition to monotonic increase (when heat source is not compensated by sink) and turbulent pulsations. Current velocity

[redacted] 165T27

USSR/Geophysics - Heat Exchange 1 Jun 50

also fluctuates with same period while maintaining its direction. Submitted 3 Apr 50 by Acad V. V. Shuleykin.

[redacted] 165T27

BYZOVA, N. L.

PA 193T38

USSR/Geophysics - Thermal Convection Sep/Oct 51

"Self-Excited Oscillations of Thermal Convective Flow," N. L. Byzova, Marine Hydrophys Inst, Acad Sci USSR

"Iz Ak Nauk, Ser Geofiz" No 5, pp 85-92

Describes results of convection tests in closed space. It was found that under certain conditions self-excited oscillations have a several-min period and stable amplitude. Applies optical method of Dvorzhak (cf. Kirpichev and Mikheyev "Zhur Prik Fiz" Vol V, No 3-4, 1928) to wave analysis. Presents hypothesis on origin of self-excitation. Submitted 25 Nov 51.

193T38

SOV/124-57-3-3190

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 3, p 78 (USSR)

AUTHOR: Byzova, N. L.

TITLE: Self-excited Oscillations of a Thermal Convection Current (Samovozbuzhdayushchiyesya kolebaniya potoka teplovoy konvektsii)

PERIODICAL: Tr. Mor. gidrofiz. in-ta, AN SSSR, 1955, Nr 6, pp 58-79

ABSTRACT: The paper analyzes the temperature and velocity oscillations in a convection current. The current was generated in an open rectangular vessel; the heater (an electric plate) was placed under one half of the vessel bottom, while the other half of the bottom was being cooled. Three models were used, the smallest measuring 100x10x30 cm. The temperature of the flow was measured by thermocouples, while the velocity of the liquid was determined by observation of particles suspended therein. Some other observations (the shadowgraph method, coloring of the water, etc.) were also made. The water in the vessel flowed along the bottom from the cold half to the hot half, rose up along the side wall, and returned along the free surface to the cold half of the bottom. Temperature and velocity fluctuations were noted at every point of the

Card 1/3

Self-excited Oscillations of a Thermal Convection Current

flow even during stationary external conditions. The water temperature during various experiments was from 15 to 45° C; the amplitude of its oscillations was 0.1 - 0.3. The mean flow velocities were 0.[illegible] - 1.3 cm/sec; the amplitude of the velocity fluctuations amounted to 1/3 of the mean velocity. The period of oscillations at different points was uniform and lasted several minutes. An increase in the amount of heat supplied results in a greater flow velocity and increased frequency of the oscillations. The paper adduces the results of recordings of the temperature oscillations at various points. The substance of the phenomenon lies in the fact that a specified mass of water, after having been heated at the bottom (thermal perturbation), is transported thereupon by a closed-circuit convective flow. The consecutive movement of such a perturbation past a certain point is registered as a temperature oscillation and a velocity fluctuation associated therewith. The condition necessary for maintaining the oscillations is determined by a relationship between the time of the penetration of the thermal perturbation within the fluid and the time required for the perturbation to travel around the perimeter of the basin. The above-mentioned condition depends to a considerable extent upon the mode of heating. Three possible mechanisms for the maintenance of the oscillations are discussed in the paper. Near the heated bottom a perturbation proceeds slowly and is, therefore, additionally heated; near the free surface the perturbation moves faster and, hence, does not cool off

Card 2/3

Self-excited Oscillations of a Thermal Convection Current

as much as the other parts of the fluid. And, lastly, an important part is played by the regime of the basin's corner located beyond the heated half of the bottom. Fundamental results of the above-mentioned investigations by the same author were published earlier (Dokl. AN SSSR, 1950, Vol 72, Nr 4; Izv. AN SSSR, ser. geofiz., 1951, Nr 5). Bibliography: 12 references.

Ye. M. Zhukhovitskiy

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 4, p 78 (USSR) SOV/124-57-4-4395

AUTHOR: Byzova, N. L.

TITLE: On the Theory of Self-excited Oscillations in a Thermal-convection Flow (K teorii samovozbuzhdayushchikhsya kolebaniy potoka teplovoy konvektsii)

PERIODICAL: Tr. Mor. gidrofiz. in-ta AN SSSR, 1955, Vol 6, pp 80-97

ABSTRACT: The author examines the flow of a plane horizontal layer with a free surface. The temperature gradient along the layer is constant. An equation for the mean velocity in the lower and upper portions of the flow was found on the basis of the assumption that the velocity profile differs only slightly from the stationary profile. An empirical coefficient is employed in the equation which furnishes a relationship for the temperature and velocity variations. The amplitude of the temperature fluctuations in the bottom layer is evaluated for given velocity fluctuations with the aid of the equation for thermal conductivity. It is noted that the values thus obtained are in satisfactory agreement with the experimental values. The propagation of thermal disturbances in a rectilinear flow having a constant velocity throughout its

Card 1/2

cross section is examined. Two solutions for the equation of thermal conductivity are examined in the beginning of the article; these solutions define the propagation of turbulence in the absence of thermal influx into the system. In this instance the oscillations decay gradually since no mechanism is present to maintain them. By examining a general case, the conditions required for nondecaying oscillations are established. Inasmuch as this relationship includes an unknown function defining the thermal influx into the system, no theoretical conclusions can be drawn from an analysis of this relationship.

Ye. M. Zhukhovitskiy

124-58-6-6842

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 6, p 83 (USSR)

AUTHOR: Byzova, N. L.

TITLE: Establishment of the Atmospheric Temperature Above an Oceanic Surface Containing Ocean Currents (Formirovaniye temperatury vozdukha nad morem pri nalichii v nem techeniy)

PERIODICAL: Tr. Mor. gidrofiz. in-ta, AN SSSR, 1956, Vol 7, pp 126-134

ABSTRACT: The equation given below is solved

$$\frac{\partial \vartheta}{\partial t} = \frac{\partial}{\partial z}\left[k(z) \frac{\partial \vartheta}{\partial z} \right] + f(z,t)$$

for $-H<z<0$ (sea), $k(z) = k_1 = \text{const.}$;

for $0<z<h$ (air), $k(z) = k_2(1+mz)$; and

for $h<z<\ell$ (air), $k(z) = k_2(1+mh) = \text{const.}$;

where ϑ is the temperature, t is the time, z is the vertical coordinate, $k(z)$ is the exchange coefficient, and the function

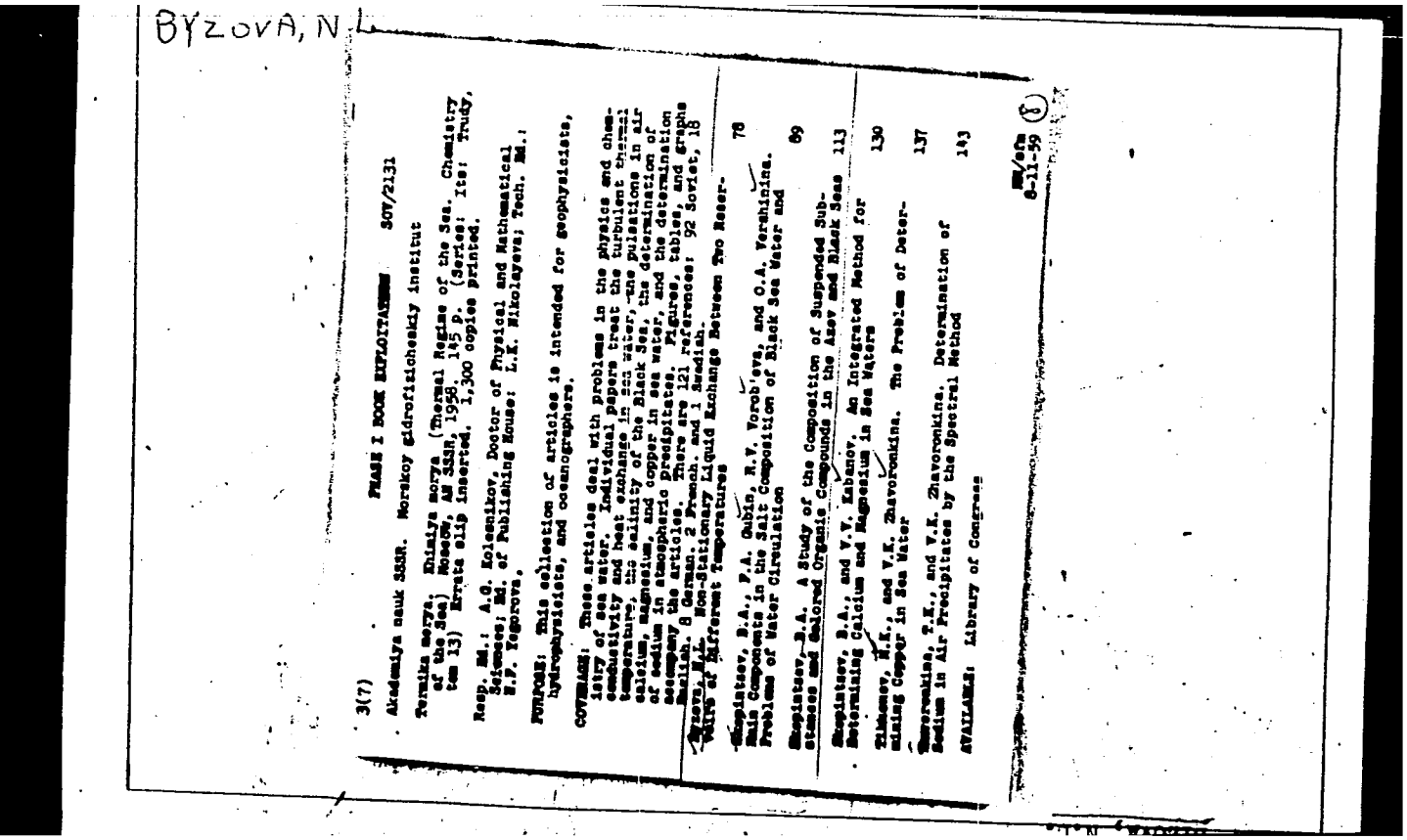
Card 1/2

Establishment of the Atmospheric Temperature (cont.)

f (z, t) is equal to zero in the air, and is assumed to be known in the water. The equation is solved by means of the eigenfunction method for any arbitrary initial temperature values and corresponding boundary conditions. It should be noted that problems similar to the present one and even of a more general nature have been examined in the works of N.R.Malkin (see, for example, Izv. AN SSSR, Ser. geogr. i geofiz., 1944, Nr 5, Tr. nauchno-issledovatel'skikh uchrezhdeniy. Tsentral'nyy institut prognozov. Teoreticheskaya meteorologiya. Seriya I, 1947, Nr 30).

Ye.M.Dobryshman.

1. Atmosphere--Temperature 2. Ocean currents--Thermal effects
3. Temperature--Measurement



BYZOVA, N.

3(7) SOV/2131

Akademiya nauk SSSR. Morskoy gidrofizicheskiy institut

Trudy morya (Thermal Regime of the Sea. Chemistry of the Sea) Moscow, AN SSSR, 1958. 145 p. (Series: Its: Trudy, tom 13) Errata slip inserted. 1,300 copies printed.

Resp. Ed.: A.G. Kolesnikov, Doctor of Physical and Mathematical Sciences; Ed. of Publishing House: L.K. Nikolayeva; Tech. Ed.: E.P. Yegorova.

PURPOSE: This collection of articles is intended for geophysicists, hydrophysicists, and oceanographers.

COVERAGE: These articles deal with problems in the physics and chemistry of sea water. Individual papers treat the turbulent thermal conductivity and heat exchange in sea water, the pulsations in air temperature, the salinity of the Black Sea, the determination of calcium, magnesium, and copper in sea water, the determination of sodium in atmospheric precipitates, and the determination of oxygen in sea water, and the determination of sodium in atmospheric precipitates. Figures, tables, and graphs accompany the articles. There are 121 references: 92 Soviet, 18 English, 8 German, 2 French, and 1 Swedish.

Table of Different Temperatures Non-Stationary Liquid Exchange Between Two Reser-

BK/ebm
8-11-59

BYZOVA, N.L.; NESTEROV, V.S.

Thermal damping of sound in a suspension of high concentration.
Akust.zhur. 5 no.4:408-414 '59. (MIRA 14:6)

1. Kafedra akustiki Moskovskogo gosudarstvennogo universiteta.
(Suspensions (Chemistry))
(Sound waves--Damping)

S/863/62/000/000/002/008
D207/D308

AUTHORS: Dmitriyev, A.A., Bonchkovskaya, T.V. and Byzova, N.L.

TITLE: Estimates of the parameters for modeling of atmospheric circulation in rotating liquid-filled containers

SOURCE: Modelirovaniye yavleniy v atmosfere i gidrosfere; trudy Pervoy mezhduvedomstvennoy konferentsii 22-26 noyabrya 1960 g. Moscow, Izd-vo AN SSSR, 1962, 20-31

TEXT: The purpose of this paper is: 1) to select the parameters (dimensions and geometrical forms of containers, temperature drop) for modeling of large-scale circulation in the atmosphere so that they satisfy the requirements of similarity; 2) to estimate the effective viscosity coefficient in such models; 3) to find whether it is possible to establish vertical temperature (or density) stratification in a model, similar to the typical stratification in the atmosphere; 4) to formulate some problems which can be attacked by modeling methods. The following conclusions and results are re-

Card 1/2

ported: 1) It is recommended that the container should be a body of revolution: a sphere, a paraboloid or a cylinder with a flat base. The suggested dimensions of containers are given in mathematical relationships. By heating one part of the container base and cooling another, horizontal temperature gradients of 1.0 deg/cm can be obtained. A water-filled container (up to 75 cm in dimensions) should rotate at about 0.1 rev/sec in order to simulate atmospheric circulation. 2) The effective viscosity in water-filled rotating cylinders is 0.1 cm^2/sec. 3) Vertical temperature stratification can be obtained by using two heaters: one above the container and the other below it. 4) Modeling can be used for studying radioactive fallout, possible control of the weather, effects of cities, large factories or water reservoirs on the weather etc. There are 4 figures.

ASSOCIATION: Institut prikladnoy geofiziki, AN SSSR (Institute of Applied Geophysics, AS USSR)

BYZOVA, N. L.

PHASE I BOOK EXPLOITATION SOV/6277

Karol', I. L., and S. G. Malakhov, Candidates of Physics and Mathematics, eds.

Voprosy yadernoy meteorologii; sbornik statey (Problems in Nuclear Meteorology; a Collection of Articles) Moscow, Gosatomizdat, 1962. 271 p. Errata slip inserted. 2600 copies printed.

Ed.: A. I. Zavodchikova; Tech. Ed.: Ye. I. Mazel'.

PURPOSE: The book is intended for meteorologists and physicists specializing in the physics of the atmosphere. It may also be of interest to oceanographers concerned with the contamination of seas and oceans with radioactive waste products.

COVERAGE: This is a collection of 15 articles dealing with various problems of nuclear meteorology. The rapid development of the methods of radiometry opened the possibility of measuring minute particles of radioactive substances

Card 1/6

1/3

with a great degree of accuracy. This again made it possible to use radioactive isotopes in various fields of science, including meteorology. Tests of nuclear arms and the dispersion into the atmosphere of the waste of atomic industry necessitated a thorough investigation of the patterns of the spread of aerosols and gases, sometimes throughout almost the entire atmosphere. Such investigation is connected with the wide use of the newest methods and results of meteorology and the physics of the atmosphere in general. On the other hand, the distribution in the atmosphere of air masses, labeled with radioactive atoms, gives the meteorologists a new method for the study of atmospheric processes. The entire complex of problems related to the study of the distribution of radioactive impurities in the atmosphere and the use of radioactive atoms as labels in air masses or clouds has lately received the name of "nuclear meteorology" and is regarded as a branch of the physics of the atmosphere. The present collection contains some general articles, as well as articles reporting on the results of special investigations of certain problems of nuclear meteorology conducted in 1960-1961. It is divided in three sections, each dealing with a certain type of problem of nuclear meteorology. Bibliographic references are included at the end of individual articles.

SECTION THREE

TURBULENT DIFFUSION OF AEROSOLS IN THE ATMOSPHERE

DMITRIYEV, A.A., otv. red.; BYZOVA, N.L., otv. red.; KRAVCHENKO, N.M., red.izd-va; NIKOLAYEVA, L.K., red. izd-va; POLYAKOVA, T.V., tekhn. red.

[Studying the boundary layer of the atmosphere from a 300-meter weather tower]Izuchenie pogranichnogo sloia atmosfery s 300-metrovoi bashni. Moskva, Izd-vo Akad. nauk SSSR, 1963. 158 p. (MIRA 16:3)

1. Akademiya nauk SSSR. Institut prikladnoy fiziki.
(Atmosphere)

ACCESSION NR: AT4010218 S/3056/63/000/000/0003/0013

AUTHOR: Aleksandrova, A. K.; By*zova, N. L.; Mashkova, G. B.

TITLE: Experiments on the dissemination of precipitating contaminants from a point source in the lower atmosphere

SOURCE: Issledovaniye nizhnego 300-metrovogo sloya atmosfery*. Moscow, 1963, 3-13

TOPIC TAGS: meteorology, air pollution, precipitating contaminant, point source contamination, lower atmosphere, turbulent diffusion

ABSTRACT: In calculating the diffusion of either precipitating or weightless contaminants in the boundary layer of the atmosphere, a phenomenon which depends both on the properties of the contaminant particles and on the turbulence of the air, the maximum concentration of contaminants and the distance of this point from the source are of considerable interest. The authors therefore present the results of 53 experiments and derive formulas for these parameters on the basis of 2 systems of calculation, assuming either that the coefficient of vertical turbulent diffusion increases linearly with height, or that it is independent of height. For this purpose, 4 types of atmospheric stratification were distinguished (indifferent stratification and 3 degrees of instability), and inversions were not considered. As shown by graphs relating the height of the source to the dis-

Card 1/2

ACCESSION NR: AT4010218

tance between it and the point of maximum contaminant precipitation, as well as the relationships between atmospheric turbulence and the maximum contaminant concentration or length of the contaminated zone, the distance from the source to the area of maximum contaminant density, corrected for the effect of gravity, was proportional to the height of the source within each type of stratification and within the altitude range of 25-300 meters (error of ± 25%). The parameters of horizontal diffusion were determined by the type of stratification, while the position and magnitude of the maximum contaminant density and the length of the contaminated zone were determined by the ratio between the gravitational forces and the turbulence. At relatively high turbulence, the first type of calculation yielded better results for the maximum contaminant density, but the second type of calculation was preferable for determining the length of the contaminated zone; at relatively low turbulence, the method of calculation was immaterial. Orig. art. has: 3 tables, 5 figures and 12 formulas.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 20Feb64 ENCL: 00

SUB CODE: AS NO REF SOV: 009 OTHER: 003

Card 2/2

ACCESSION NR: AT4010220 S/3056/63/000/000/0026/0034

AUTHOR: By*zova, N. L.

TITLE: Some results of measurements of the horizontal diffusion of a contaminant in the lower atmosphere

SOURCE: Issledovaniye nizhnego 300-metrovogo sloya atmosfery*. Moscow, 1963, 26-34

TOPIC TAGS: meteorology, air pollution, horizontal diffusion, lower atmosphere, atmospheric stratification

ABSTRACT: After a detailed mathematical treatment of the factors affecting diffusion of an aerosol from a point source in the lower atmosphere, the author analyzes the results of experiments carried out in 1959-61 at altitudes of 25-300 meters. During these studies, which provided 226 separate values at distances ranging from 100 meters to 10 km, the atmospheric stratification varied from neutral to highly unstable, and the rate of fall of the contaminant particles due to gravity was less than 0.3 meters/sec, so that diffusion in the vertical direction could be neglected. The data obtained are shown in Fig. 1 of the Enclosure. An extensive analysis of these results showed that the ratio between wind pulsation and wind velocity is essentially independent of height under conditions of indif-

Card 1/2

ACCESSION NR: AT4010220

ferent or unstable stratification. Orig. art. has: 3 tables, 4 figures, and 14 formulas.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 20Feb64 ENCL: 02

SUB CODE: AS NO REF SOV: 011 OTHER: 010

Card 2/2

BYZOVA, N.L.

IUdin - Shvets's pattern for the boundary layer of the atmosphere, using the principle of corresponding states. Izv. AN SSSR. Ser. geofiz. no.8:1273-1278 Ag '64 (MIRA 17:8)

BYZOVA, N.L.; [illegible], R.I.

Analysis of the field of concentration of heavy pollution according to data of experiments on a 300-m. meteorological tower. Trudy GGO no.172:35-41 '65. (MIRA 18:8)

L 2667-66 EWT(1)/EWT(m)/EPF(c)/FCC/EWP(j)/EWA(h) RPL WW/GS/RM/GW
ACCESSION NR: AT5023954 UR/0000/65/000/000/0392/0402

AUTHOR: Byzova, N. L.; Mashkova, G. B.; Osipov, Yu. S.

TITLE: Results of model experiments on the distribution of pollutants settling into the lower layers of the atmosphere under various meteorological conditions

SOURCE: Nauchnaya konferentsiya po yadernoy meteorologii. Obninsk, 1964. Radioaktivnyye izotopy v atmosfere i ikh ispol'zovaniye v meteorologii (Radioactive isotopes in the atmosphere and their use in meteorology); doklady konferentsii. Moscow, Atomizdat, 1965, 392-402

TOPIC TAGS: micrometeorology, meteorological tower, aerosol fallout, air pollution, atmospheric boundary layer, atmospheric surface boundary layer

ABSTRACT: This paper describes and summarizes the results of a series of theoretical model and field experiments carried out between 1959 and 1963 at the 300-m meteorological tower of the Institute of Applied Geophysics at Obninsk to study the dispersion of effluents from various heights. The aerosols were spherical particles of poly[methyl]-

Card 1/2

L 2667-66

ACCESSION NR: AT5023954

methacrylate powders ranging between 10 and 100 μ in diameter. Measurements were made of four fractions ejected at speeds of 0.27, 0.17, 0.1, and ~ 0.03 m/sec, at 100—200 points, 10—20 km away from the source. Meteorological parameters measured included the wind-velocity profiles, wind direction, temperature profile (daytime and nighttime inversions), and such turbulence characteristics as wind-direction pulsations. The results obtained from the field measurements are compared with those derived experimentally. Orig. art. has: 4 formulas, 4 figures, and 4 tables. [ER]

ASSOCIATION: none

SUBMITTED: 28Apr65 ENCL: 00 SUB CODE: ES, NP

NO REF SOV: 011 OTHER: 001 ATD PRESS: 4101

Card 2/2

L 0902-66 EWT(1)/FCC GW

ACC NR: AP5028360 UR/0362/65/001/011/1209/1211

AUTHOR: Byzova, N. L.; Mashkova, G. B.

ORG: Institute of Applied Geophysics (Institut prikladnoy geofiziki)

TITLE: Evaluation of the dependence of the geostrophic friction coefficient on stratification, on the basis of observations in the lower layer of the atmosphere

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 1, no. 11, 1965, 1209-1211

TOPIC TAGS: meteorology, atmospheric stratification, geostrophic wind, boundary layer theory

ABSTRACT: The geostrophic friction coefficient $c = v_* / V_g$ is one of the dynamic characteristics of the boundary layer of the atmosphere and is defined as the ratio of the dynamic velocity $v_* = (\tau_0/\rho)^{\frac{1}{2}}$, where τ_0 is the tangential stress at a level of roughness, to the velocity of the geostrophic wind $V_g = (1/\rho l)(\partial p/\partial n)$, determined by the pressure field. The material for the present article consists of wind velocity measurements carried out in 1962-1964 on a 300 meter meteorological tower. In 1962, selection of data was made on a random

Card 1/2

UDC:551.551.25

ACC NR: AP5028360

basis in the course of the spring-autumn season, without previous evaluation of the profiles from the point of view of a steady state of the boundary layer. In all, 350 profiles were used, obtained at various times of day. In 1963 and 1964, the data were obtained in the course of 14 nights and 9 days. Data obtained in the morning hours after sunrise and up to complete destruction of the night inversion, as well as in periods following precipitation, were excluded from consideration. The calculated dependence of the geostrophic friction coefficient on the stratification parameters is presented in two figures; one for a steady state of the lower layer of the atmosphere, and one for an unsteady state. Orig. art. has: 2 figures and 1 table.

SUB CODE: ES/ SUBM DATE: 29Mar65/ ORIG REF: 002/ OTH REF: 001

Card 2/2

L 23419-66 EWT(1)/FCC GW
ACC NR: AT6012590 SOURCE CODE: UR/3201/65/000/002/0035/0043

AUTHOR: Byzova, N. L.; Mashkova, G. B. 30 BH

ORG: Institute of Applied Geophysics (Institut prikladnoy geofiziki)

TITLE: Wind-velocity profiles 12,44,65 in the atmospheric boundary layer

SOURCE: Leningrad. Institut prikladnoy geofiziki. Trudy, no. 2, 1965. Pogranichnyy sloy atmosfery (Boundary layer of the atmosphere), 35-43

TOPIC TAGS: micrometeorology, meteorological tower, atmospheric boundary layer, wind profile, atmospheric turbulence

ABSTRACT: Results derived by numerically calculating 350 wind-velocity profiles using the Yudin-Shvets method are compared with profiles measured at the 300-m meteorological tower's test area (1962—1964). Sample semilogarithmic wind-velocity profiles obtained by the two methods are presented in graphic form (see Fig. 1). An evaluation is made of the dependence of the geostrophic friction coefficient on

Card 1/2 UDC: 551.506+508+508.2+508.5+510

2

L 23419-66
ACC NR: AT6012590

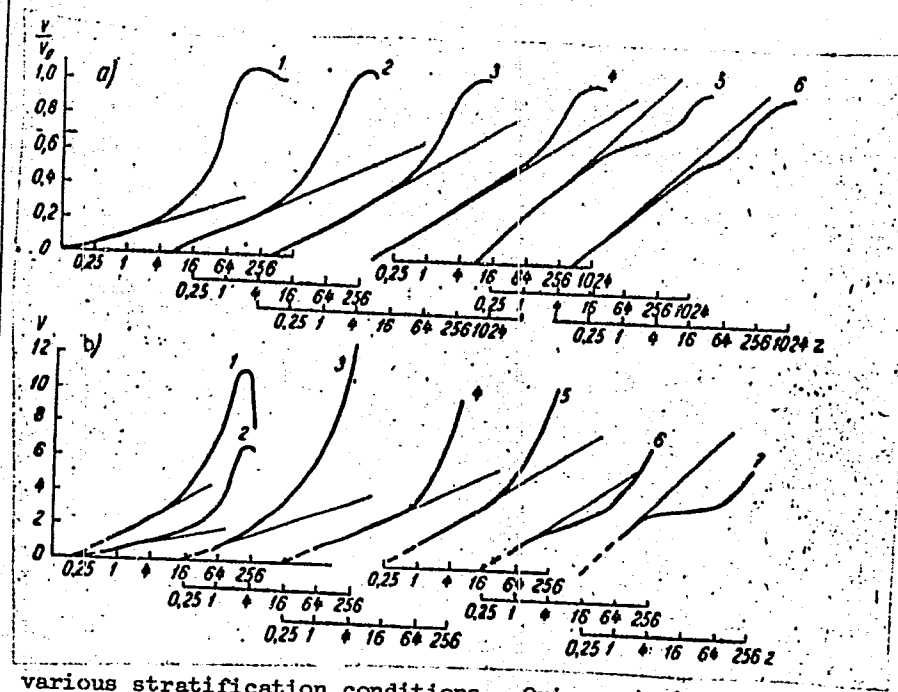


Fig. 1. Calculated (a) and measured (b) profiles of wind velocity:

a) $R = 10^6$; 1—4 - $c = 0.02, 0.025, 0.0333, 0.037$; 5 - $\frac{\beta z_0}{L} = 10^{-3}$; 6 - $\frac{\beta z_0}{L} = 2 \cdot 10^{-3}$;

b) 1—3 - inversion; 4—5 - neutral state; 6—7 - unstable state

various stratification conditions. Orig. art. has: 12 formulas and 5 figures. [ER]
SUB CODE: 04/ SUBM DATE: none/ ORIG REF: 009/ OTH REF: 002/ ATD PRESS: 4233

Card 2/2

L 23428-66 EWT(1)/FCC/T JK/GW
ACC NR: AT6012599 SOURCE CODE: UR/3201/65/000/002/0123/0129

AUTHOR: Byzova, N. L.

ORG: Institute of Applied Geophysics (Institut prikladnoy geofiziki)

TITLE: Influence of the polydispersion of settling pollutants on the distribution of fallout density on the earth's surface

SOURCE: Leningrad. Institut prikladnoy geofiziki. Trudy, no. 2, 1965. Pogranichnyy sloy atmosfery (Boundary layer of the atmosphere), 123-129

TOPIC TAGS: micrometeorology, atmospheric pollution, fallout density, pollutant dispersion, point source, atmospheric boundary layer, atmospheric aerosol

ABSTRACT: This paper presents the development of two individual types of formulas which can be used to determine the density of fallout on the earth's surface when the pollutant is ejected from a point source in a polydispersed state into the atmospheric boundary layer. Various concepts are presented for the coefficient of vertical turbulent diffusion K_2 and the mechanism for the settling of pollutants on the underlying surface. In the first type of formula, K_2 is assumed to increase linearly with height, and in the second, it is assumed that K_2 is independent of the vertical coordinate. Calculations of the vertical turbulent-diffusion parameter b_y by either the first or second formulas were determined in terms of x_m (where x is the distance to the source epicenter) and indicated that errors which might be due to a polydispersed state amounted to 2—6% during unstable conditions and for all types of

Card 1/2 UDC: 551.506+508+508.2+508.5+510

L 22428-66
ACC NR: AT6012599

aerosols, and might reach 10% when used to calculate v_2. During stable conditions v_{eff} had to be used (error up to 10%), and with particles ranging in size from 0—45 μ, the error might be up to 30—50%. Under unstable conditions, with large particles ranging from 65—100 or more μ, the turbulent-diffusion parameter could not be determined because their maximum concentration on the ground was due to gravitational settling. In calculating v_{eff}, with particles in the 45—65 μ range, the error was on the order of 10%. The author states that these calculation results can be used only when there is no interaction between aerosol particles, i.e., when large concentrations are not present in a cloud. Orig. art. has: 4 figures, 13 formulas, and 3 tables.

[ER]

SUB CODE: 04/ SUBM DATE: none/ ORIG REF: 006/ OTH REF: 001/ ATD PRESS: 4233

Card 2/2

L 23422-66 EWT(1)/FCC/T JK/GW

ACC NR: AT6012593 SOURCE CODE: UR/3201/65/000/002/0065/0073

AUTHOR: Byzova, N. L.; Osipov, Yu. S.

24
B+1

ORG: Institute of Applied Geophysics (Institut prikladnoy geofiziki)

TITLE: Distribution during inversions of heavy pollutants in the lower layer of the atmosphere

SOURCE: Leningrad. Institut prikladnoy geofiziki. Trudy, no. 2, 1965, Pogranichnyy sloy atmosfery (Boundary layer of the atmosphere), 65-73

TOPIC TAGS: micrometeorology, meteorological tower, air pollution, inversion, atmospheric aerosol distribution, atmospheric boundary layer, surface boundary layer

ABSTRACT: Results are presented for two series of model experiments set up to study the distribution of pollutants in the lower layer of the atmosphere during inversions. Observations were made at night for one year, with daytime measurements also made in the winter and early spring. Use of the instruments at the 300-m meteorological tower made it possible to determine the wind speed and temperature profiles and gradients at the height of 8 m, the wind direction profile from 8 m to 300 m, and the fluctuations in wind direction. Twenty-five experiments were made for inversions in the autumn-winter season of 1962-1963. The point source height varied between 50 and 300 m over periods lasting 10—40 min. The aerosols used were spherical particles with a rate of gravitational settling ω varying from 0.005—0.3 m/sec.

Card 1/2 UDC: 551.506+508+508.2+508.5+510

L 23422-66
ACC NR: AT6012593

Results of these experiments are presented in tabular form. Except for a few corrections, analytical procedures used in studying pollutant distribution were similar to those used by Aleksandrova, Byzova, and Mashkova, as reported in the second report on the research carried out at the 300-m meteorological tower (Investigation of the lower 300-meter layer of the atmosphere, Academy of Sciences, USSR, 1963). Experimental and calculated pollutant fallouts are compared, and the results are presented in graphs. Special features noted for pollutant distribution during inversions, not found for other types of stratification, were as follows: in one instance, the plume was sharply bent (probably related to the effect of poorly expressed relief on the wind direction), and in another instance, a weakly expressed maximum in precipitation density was detected. Orig. art. has: 5 figures, 1 formula, and 4 tables. [ER]

SUB CODE: 04/ SUBM DATE: none/ ORIG REF: 009/ OTH REF: 001/ ATD PRESS: 4233

Card 2/2 dda

L 20961-66 EWT(1)/FCC GW

ACCESSION NR: AT5019733 UR/2531/65/000/172/0035/0041

AUTHOR: Byzova, N. L.; Onikul, R. I.

TITLE: Analysis of the heavy-contaminant concentration field from data of experiments carried out at the 300-meter meteorological tower

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 172, 1965. Voprosy atmosfernoy diffuzii i zagryazneniya vozdukha (Problems of atmospheric diffusion and contamination), 35-41

TOPIC TAGS: atmospheric particle diffusion, air pollution, meteorological tower, aerosol

ABSTRACT: Utilizing the numerical solutions of the turbulent diffusion equation (M. Ye. Berlyand, Ye. L. Genikhovich, V. P. Lozhkina, R. I. Onikul, Tr. GGO, no. 158, 1964), the author analyzed data obtained by scattering in the atmosphere heavy pollutants ejected from various levels of the 300-meter meteorological tower. The point sources sprayed chemically neutral substances of various colors (red, orange, and yellow polymethylmethacrylate [sic]), which could then be collected simultaneously. Subsequently, the colored samples were studied under ultraviolet light. Tests show that the theoretical results are in excellent agreement with the experimental data.

Card 1/2

L 20961-66

ACCESSION NR: AT5019733

Concentration of various fractions could be calculated from the precipitation rate on the collecting surfaces. These, in turn, permitted the calculation of the maximum ground concentrations and distances at which they are observed as a function of the source altitude, wind velocity, atmospheric stratification, and the rate of gravitational precipitation of the particles. All results are in the form of tables. Orig. art. has: 9 formulas and 2 tables. [08]

ASSOCIATION: Glavnaya geofizicheskaya observatoriya, Leningrad (Main Geophysical Observatory)

SUBMITTED: 00 ENCL: 00 SUB CODE: ES

NO REF SOV: 008 OTHER: 000 ATD PRESS: 4084

Card 2/2

L 37700-66 EWT(1)/FCC GW

ACC NR: AP6024423 SOURCE CODE: UR/0362/66/002/007/0681/0687

AUTHOR: Byzova, N. L.; Mashkova, G. B.

ORG: Institute of Applied Geophysics (Institut prikladnoy geofiziki)

TITLE: Dimensionless characteristics of the wind-velocity profile from measurements in the lower 300-m layer of the atmosphere

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 2, no. 7, 1966, 681-687

TOPIC TAGS: micrometeorology, ~~wind speed~~, wind velocity ~~profile~~, meteorological tower, ~~atmospheric~~ surface boundary layer, ~~wind velocity modulo~~, geostrophic drag, atmospheric turbulence, atmosphere stratification

ABSTRACT: Extensive wind velocity data obtained in 1962 and 1963 from 13 levels of the 300-m meteorological tower of the Institute of Applied Geophysics [Obninsk] and from 5 levels of the surface boundary-layer gradient tower have been used to obtain dimensionless wind profiles in the lower 300 m of the atmosphere for the stratification parameters B and μ. Here

$$B = (gH/T_0)\cdot(\Delta\vartheta/v^2),$$

where $\Delta\vartheta$ is the temperature difference at the 1- and 4-m levels, v is the wind speed at the 2-m level, g is the gravity acceleration, and T_0 is the mean absolute temperature);

$$\mu = lv_*^2/[\varkappa^2 g/T_0(-q/c_p\rho)],$$

Card 1/2 UDC: 551.554

L 37700-66

ACC NR: AP6024423

where $q/c_p\rho$ is the vertical turbulent-heat flux divided by the specific heat of the air at constant pressure and density. The scale $L_1 = xv_*/\ell$ was used to normalize the vertical coordinates (v_* is the drag velocity, ℓ is the Coriolis parameter, and x is the Karman constant). The values v_* and Б were calculated for each profile, and the profiles were grouped by the proximate values of both parameters; the averaged profiles were normalized using the mean value of v_* for the group. Subsequently, the normalized profiles were again grouped but only for the stratification parameters Б or μ (total of 20 Б groups and 16 μ groups). Results indicated that under stable conditions the dimensionless profiles were greatly dependent on the stability parameter but showed no dependence on this parameter under unstable conditions. Investigations made to determine the dependence of the geostrophic drag coefficient on stratification were compared with the theoretical conclusions of O'Neil. Changes in the profiles with changes in stratification were found to be essentially identical, but there were quantitative differences (greater spread in v/v_* values and in maximum speeds). Orig. art. has: 3 figures and 2 tables. [ER]

SUB CODE: 04/ SUBM DATE: 25Jan65/ ORIG REF: 007/ OTH REF: 004/ ATD PRESS: 5041

Card 2/2

S/081/61/000/022/016/076
B102/B108

AUTHORS: Kovalenko, P. N., Bagdasarov, K. N., Byzova, R. P.

TITLE: Electrolytic separation of bismuth from small quantities of lead and cobalt, cadmium and zinc, and the polarographic determination of microimpurities

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 22, 1961, 108-109, abstract 22D39 (Sb. "Fiz.-khim. metody analiza i kontrolya proiz-va", Rostov-na-Donu, Rostovsk. un-t, 1961, 33-41)

TEXT: The conditions of electrodeposition of Bi from nitric-acid solutions containing glucose on a Cu-coated Pt cathode are investigated. The effects of acidity of the solution and of temperature on the rate of electrodeposition of Bi at constant cathode potential, and on the quality of the deposit are shown. A combined electrochemical method of determining microquantities of Pb and Co, Cd and Zn in electrolytic Bi solutions has been worked out. In electrolysis with nitric-acid solutions Bi is deposited quantitatively, the metal impurities are determined polarographically upon a background of 0.5M KSCN solution. [Abstracter's

Card 1/2

Electrolytic separation of bismuth...

S/081/61/000/022/016/076
B102/B108

note: Complete translation.]

Card 2/2

BYZOVA, R.P.; KOVALENKO, P.N.

Method of cathode electrodeposition of lead. Izv.vys.ucheb.zav.; khim.i khim.tekh. 6 no.4:557-561 '63. (MIRA 17:2)

1. Rostovskiy-na-Donu gosudarstvennyy universitet. Kafedra analiticheskoy khimii.

BORUKAYEV, Ch.B.; BYZOVA, S.L., aspirant

Stratigraphy and paleogeography of the Upper Jurassic of the Chvezhipsinskaya zone; northwestern Caucasus. Izv. vys. ucheb. zav.; geol. i razv. 7 no.9:40-47 S '64.

(MIRA 17:10)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

61 BYZOVA, Ye.A.

Equilibrium of the system KCl-K_2SO_4-H_2O. V. Ya. Anosov and Ye. A. Byzova (Gertsen Pedagog. Inst., Leningrad). *Trudy Sektora Fiz.-Khim. Anal., Inst. Obshchei i Neorg. Khim., Akad. Nauk S.S.S.R.* 15, 118-24(1947).—The soly. isotherms and sp. gr. of the system were studied at 0, 25, 50, 80, 70, and 100°. The results are tabulated. This investigation was particularly concerned with the soly. of one salt in an unsatd. soln. of the other.

M. Hoseh

BYZOVA, Yu.B.

Effect of spraying chemicals from an airplane on the fauna of soil invertebrates in coniferous forests. Zool. zhur. 43 no.4:488-502 '64 (MIRA 17:8)

1. Laboratory of Soil Zoology, Institute of Animal Morphology, Academy of Sciences of U.S.S.R., Moscow.

USSR / General and Special Zoology. Insects. Systematics and Faunistics. P

Abs Jour: Ref Zhur-Biol., No 14, 1958, 63922.

Author : Ryzova, Yu. B.; Gilyarov, M. S.
Inst : Not given.
Title : Soil-inhabiting Larvae of Darkling Beetles of the Helopini Tribe (Coleoptera, Tenebrionidae).

Orig Pub: Zool. zh., 1956, 35, No 10, 1493-1508.

Abstract: General characteristics of the tribe Helopini larvae, ecology and detailed morphological description of the larvae of seven species of darkling beetles. An identifying table of larvae of these species.

Card 1/1

BYZOVA, Yu. B. (Moscow)

"On the compensation development and the

Theoretical and Practical Work Carri d out by Entomologists.
reported at All-Union Entomological Conference, Georgian Dept. A-U
Entomological Society, Tbilisi, 4-9 Oct 1957.
Vestnik AN SSSR, 1958, v. 28, No. 1, p. 129-30 (author Gilyarov, M. S.)

BYZOVA, Yu.B.

Larvae of darkling beetles of some tribes of the subfamily Tenebrionidae (Coleoptera, Tenebrionidae). Zool.zhur. 37 no.12: 1823-1830 D '58. (MIRA 12:1)

1. Laboratory of Soil Zoology, Institut of Animal Morphology, Academy of Sciences of the USSR (Moscow).
(Darkling beetles) (Larvae--Insects)

BYZOVA, Yu.B.

Secondary sclerotization of the integument in darkling beetles (Coleoptera, Tenebrionidae) Zool.zhur. 39 no.4:540-545 Ap '60. (MIRA 13:11)

1. Institute of Animal Morphology of the U.S.S.R. Academy of Sciences, Moscow.

(Darkling beetles)

BYZOVA, Yu. B.; GORCHAKOVSKAYA, N. N.

Effect of treating natural foci of tick-borne encephalitis with acaricides on the fauna of soil invertebrates. Med. peraz. i paraz. bol. no.4:433-438 '61. (MIRA 14:12)

1. Iz Instituta poliomiyelita i virusnykh entsefalitov AMN SSSR (dir. instituta - prof. M. P. Chumakov) i Instituta morfologii zhivotnykh imeni A. N. Severtsova AN SSSR (dir. instituta - prof. G. K. Khrushchov)

(SOIL FAUNA) (ENCEPHALITIS) (INSECTICIDES)

BYZOVA, Z.M.

Microflora of the Chu-Ili Mountains. Trudy Inst. bot. AN Kazakh. SSR 11:210-240 '61. (MIRA 15:3)

(Chu-Ili Mountains--Fungi)

BZANT, Zdenek, inz., CSc.

Influece lines of horizontally curved bridges. Stav cas 12 no.1:18-39 '64.

1. Dopravoprojekt, Praha.

B[illegible]

[illegible]ioscopy and pathomorphology of the iris in long-lived persons. Sbor. naush. trud. SOGMI no.14:15-21 '63.

(MIRA 18:9)

1. Iz kafedry glaznykh bolezney Severo-Osetinskogo meditsinskogo instituta (zav. kafedroy - prof. M.N. Bugulov).

BZAROV, Z.I.

Rigidity of the sphincter pupillae in long-lived persons. Uch. zap. nauch. trud. SOGMI no.14:22-27 '65. (MIRA 18:9)

1. Iz kafedry glaznykh bolezney Severo-Osetinskogo meditsinskogo instituta (zav. kafedroy - prof. M.N. Bugulov).

CHIBIROV, Khristofor Tadeozovich; BZAYEV, K.K., red.; DATRIYEVA, Ye.U., tekhn.red.

[North Ossetia in the fraternal family of U.S.S.R. peoples] Severnaia Osetiia v bratskoi sem'e narodov SSSR. Ordzhonikidze, Severo-Osetinskoe knizhnoe izd-vo, 1960. 100 p. (MIRA 13:10)

(Ossetia--Economic conditions)

BZDUCH, EVA.

(32)

Bucharest, Farmacia, Vol X, No 2, Feb 62

1. "The Ninth Edition of the USSR Pharmacopoeia," Prof P. IONESCU STOIAN, Farm Ing F. BERAL and Farm ELENA DEMETRESCU; pp 65-76.

2. "The Position of Centropnein in the Enzymatic Complex of the Pancreas," Farm LAURA [illegible]; pp 77-79.

3. "Investigations in the N-methyl-piperazine Series (III) Nitrobenzoic Acids and Nicotinic Acid Derivatives with a Possible Cardiovascular Action," Conf E. [illegible], Dr V. [illegible], Farm MARGARETA POPESCU, Farm ANA [illegible], Farm JANA [illegible], Farm ANA GASPET and Farm RODICA [illegible], of the Laboratory for Pharmaceutical Chemistry (Laboratorul de Chimie Farmaceutica) of the School of Pharmacy (Facultatea de Farmacie) (Bucharest); pp 81-85.

4. "Investigations on the Antituberculous Activity of Certain Hydrazones of the Thiazole Class. I. In vitro Investigations on the Koch Bacillus," Conf C. MARCU, Dr P. [illegible], [illegible] VIORICA BRATU, Dr M. [illegible], Dr EM. [illegible], Dr [illegible] and Dr P. GANE, of the Pharmacology Laboratory of the Medico-Pharmaceutical Institute (Laboratorul de Farmacologie I.M.F.) (Bucharest); pp 87-91.

5. "Glucosamine Obtained from Crustaceae; Its Therapeutical Importance," Prof S. [illegible], Farm MARIA AGNES DIMITRIU and Ing Chim I. CPAESCU; pp 93-98.

6. "On the Antispastic and Antihistaminic Action of Certain Actively Substituted Hydrazides," Prof A. [illegible], Dr EM. MANDIESCU, Dr V. [illegible], Prof M. [illegible] and Chem CATALINA [illegible]. Work performed at the Pharmacology Laboratory of the Medico-Pharmaceutical Institute (Laboratorul de Farmacologie al Institutului Medico-Farmaceutic) (Bucharest); English Summary, pp 99-105.

7. "Sodium Bicarbonate Perfusion," Farm Gh. DAIANU and Farm EVA BZDUCH; pp 107-110.

— 1/2 —

CZECHOSLOVAKIA / Cultivated Plants. Fruit Trees. M
Small Fruit Plants. Nut Trees. Tea.

Abs Jour : Ref Zhur - Biologiya, No 6, 1959, No. 25089

Author : Bzduch, G.
Inst : Not given
Title : Experiments on Grape Selection

Orig Pub : Vinarstvi, 1958, 51, No 8, 115

Abstract : No abstract given

Card 1/1

BZEZINSKI, M.

Storage of best sugar in the sugar factory in Gniezno.

P. 62. (GAZETA CUKROWNICZA) (Warszawa, Poland) Vol. 60, no. 2, Feb. 1958

SO: Monthly Index of East European Accession (EEAI) LC Vol. 7, No. 5, 1958

Bzhalava, A. N.

Phosphorus metabolism of the mammary gland in relation to milk yield and its butterfat content. A. N. Bzhalava. *Sovet. Zootekhnik* 1953, No. 5, 69–76; *Referat. Zhur. Khim., Biol. Khim.* 1955, No. 2890.—In the venous blood emanating from the mammary glands the amt. of inorg. P is above and that of the easily hydrolyzed organic P compounds below that in the arterial blood. Inorg. P and P of easily hydrolyzed organic compounds of the blood was smaller during the pasture period than during the period of barn confinement. This quantitative P picture is reversed in the milk. A parallelism was observed between the milk yield and butterfat and the amounts of the two types of P. A relationship between the milk yield and the butterfat content and the arterio-venous differential in the easily hydrolyzed P compounds was noted. In the process of milk formation the P esters, the lipides, and the protein P of the blood are utilized first. The content of P compounds in the two halves of the cows' udder may differ substantially.

B. S. Levine

MD

BZHALAVA, A.N.

Results of a chemical study of Soviet shellac. Nast. res. 1 no.1:107-108 '65. (MIRA 18:6)

1. Sukhimskaya opytnaya stantsiya po kul'ture shellaka.

BZHALAVA, D.M.

Experience in information work to aid designers. [illegible]
no.12:23 '63. (MIRA 17:6)

1. Nachal'nik otdela nauchno-tekhnicheskoy informatsii Kutaisskogo Spetsial'nogo konstruktorskogo byuro Proyektpribor.

BZHALAVA, I.

22707 Bzhalava, I. Lobotomiya. (Lecheniye psikhozov khirurgicheskim metodom). Trudy (tbilis. gos. med. in-t), T. V, 1948, S. 373-88 - na gruz. yaz. - rezyume na rus. yaz. - bibliogr: 26 nazv.

SO: LETOPIS' No. 30, 1949

1. I. A. BZHALAVA.
2. USSR (600)
4. Afterimages
7. Stereoscopic images. Soob. AN Gruz. SSR 11 no. 5. 1950.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

BZHALOVA, I. T.

I. T. Bzhalova and A. R. Luriya. "Disturbances to the fixation apparatus in local injuries to the brain", In the collection: Nevrologiya voyen. vremeni, Vol. 1, Moscow, 1949, p. 247-64

SO: U-411, 17 July 1953, (Letopis 'Zhurnal 'nykh Statey, No. 20, 1949)

1. I. T. BZHALAVA.

2. USSR (600)

4. Afterimages

7. Afterimage and fixation. Soob. AN Gruz. SSR 11 no. 2. 1950.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

BZHALAVA, I.T.; NUTSUBIDZE, SH.I., deystvitel'nyy chlen.

Process of the fixation of direction. Soob.AN Gruz.SSR 13 no.9:561-568 '52. (MLRA 6:5)

1. Akademiya Nauk Gruzinskoy SSR, Institut psikhologii im. D.N. Uznadze Tbilisi (for Bzhalava). 2. Akademiya Nauk Gruzinskoy SSR (for Nutsubidze). (Orientation)

BZHALAVA, I.T.

After-images elicited by a conditioned stimulus. Soob.AN Gruz.SSR 14 no.2:113-120 '53. (MLRA 7:5)

1. Akademiya nauk Gruzinskoy SSSR, Institut psikhologii im. D.N.Uznadze, Tbilisi. Predstavleno deystvitel'nym chlenom Akademii N.A.Berdzenishvili. (Conditioned response) (After-images)

BZHALAVA, I.T.

Fixation placement and the mechanism of temporary connections. Soob.AN Gruz.SSR 14 no.6:369-376 '53. (MLRA 7:4)

1. Akademiya nauk Gruzinskoy SSR, Institut psikhologii im. D.N. Uznadze, Tbilisi.
(After-images) (Psychology, Physiological)

BZHALAVA, I.T.

Fixation and the systemic functions of the cerebral hemispheres. Soob.AN Gruz. SSR 14 no.10:635-642 '53. (MLRA 7:5)

1. Akademiya nauk Gruzinskoy SSR Institut psikhologii im. D.N.Uznadze, Tbilisi. Predstavleno deystvitel'nym chlenom Akademii N.A.Berdzenishvili. (Brain--Localization of functions) (Psychology, Physiological)

BZHALAVA, I.T.

Two levels of mental activity and two signal systems of the brain. Soob.AN Gruz.SSR 15 no.4:247-254 '54. (MLRA 8:5)

1. Akademiya nauk Gruzinskoy SSR, Institut psikhologii im. D.N.Uznadze, Tbilisi. Predstavleno deystvitel'nym chlenom Akademii N.A.Berdzenishvili.
(Brain) (Conditioned response)

BZHALAVA, I.T.

The two-sided action of conditioned reflex connections. Soob. AN Gruz. SSR 15 no.9:621-626 '54. (MLRA 8:9)

1. Akademiya nauk Gruzinskoy SSR, Institut psikhologii im. D.N.Uznadze, Tbilisi. Predstavleno deystvitel'nym chlenom Akademii N.A.Berdzenishvili.

(Conditioned response)

BZHALOVA, I.

Two unique phenomena arising when adapting eyes to darkness. Soob. AN Gruz.SSR 16 no.4:331-336 '55. (MLRA 8:12)

1. Akademiya nauk Gruzinskoy SSR., Institut psikhologii imeni D.Uznadze, Tbilisi. Predstavleno deystvitel'nym chlenom Akademii N.A.Berdzenishvili.

(Eye)

BZHALAVA, I.T.

Personality and psychosis. Trudy Inst.psikhol. AN Gruz. SSR 11:355-376 '57. (MIRA 12:3)
(Psychoses)

BZHALAVA, Iosif Teymurazovich

[Psychopathology of schizophrenia] K psikhopatologii shizofrenii. Tbilisi, Izd-vo Akademii nauk Gruzinskoy SSR, 1958. 249 p. (MIRA 12:3)
In Georgian.
(SCHIZOPHRENIA)

PRANGISHVILI, A.S., red.; KHOIDZHAVA, Z.I., red.; ABASHIDZE, E.K., red.; BOCHORISHVILI, A.T., red.; BZHALAVA, I.T., red.; NATADZE, R.G., red.; NORAKIDZE, V.G., red.; SONGULASHVILI, M.I., red.izd-va; KHOKHIASHVILI, V.M., red.izd-va; DZHAPARIDZE, N.A., tekhred.

[Experimental studies on the psychology of attitude] Eksperimental'nye issledovaniia po psikhologii ustanovki. Tbilisi, 1958. 598 p. (MIRA 12:11)

1. Akademiya nauk Gruzinskoy SSR. Tiflis. Institut psikhologii.
(Attitude (Phychology))

BZHALAVA, I.T.

Bases in natural science for the concept of set. Eksp. issl. po psikhol. ust. 1:457-495 '58. (MIRA 13:12)
(Attitude (Psychology)) (Hallucinations and illusions)
(Conditioned response)

BZHALAVA, I.T.

Psychopathology of attitude in schizophrenics. Eksp. issl. po psikhol. ust. 1:496-523 '58. (MIRA 13:12)
(Attitude (Psychology)) (Schizophrenia)
(Hallucinations and illusions)

BZHALAVA, I.T.

Psychopathology of epilepsy from the viewpoint of the psychology of attitude. Eksp. issl. po psikhol. ust. 1:525-560 '58.
(MIRA 13:12)

(Attitude (Psychology)) (Epilepsy)
(Hallucinations and illusions)

BZHALAVA, I.T.

On the nature of the contrast illusion [with summary in English]. Vop.psikhol. 4 no.4:42-52 Jl-Ag '58. (MIRA 11:11)

1. Institut psikhologii im. D.N.Uznadze AN GruzSSR, Tbilisi.
(Senses and sensation)

BZHALAVA, Iosif Teymurazovich

[Epilepsy; psychopathological research] Epilepsiia; psikhopatologicheskoe issledovanie. Tbilisi, Sabchota Sakartvelo, 1959. 312 p. (MIRA 13:9)

(EPILEPSY)

BZHALAVA, Iosif Teymurazovich; KHODZHAVA, Z., red.; GOGIAVA, G., red. izd-va; DZHAPARIDZE, N., tekhn.

[Perception and attitude] Vospriiatie i ustanovka. Tbilisi, Izd-vo Akad.nauk Gruz.SSR, 1960. 208 p. (MIRA 13:7)
(Perception) (Attitude (Psychology))

BZHALAVA, I.T.

Experimental study of will. Trudy Inst.psikhol.AN Gruz.SSR 13:177-190 '62. (MIRA 16:2)
(Will) (Motivation)

BZHALAVA, I.T.

"Problem of subconsciousness in psychology" by A.T.Bochorishvili. Reviewed by I.T.Bzhalava. Trudy Inst.psikhol.AN Gruz.SSR 13:243-255 '62. (MIRA 16:2)
(Subconsciousness) (Bochorishvili, A.T.)

BZHALAVA, I.T.

Contrast illusion or figural after-effect. Vop. psikhol. 8 no.5:57-69 S-O '62. (MIRA 16:5)

1. Institut psikhologii imeni D.N.Uznadze AN Gruzinskoy SSR, Tbilisi.
(Perception) (Optical illusion)